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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/595,832	03/15/2007	Michael Hilditch	PROT0104PUSA	7433		
22045	7590	03/08/2010	EXAMINER			
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075				ANDRISH, SEAN D		
ART UNIT		PAPER NUMBER				
3672						
MAIL DATE		DELIVERY MODE				
03/08/2010		PAPER				

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/595,832	HILDITCH ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	SEAN D. ANDRISH	3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 December 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1 - 16 and 27 - 32 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1 - 16 and 27 - 32 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 15 May 2006 and 01 December 2009 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1.) Certified copies of the priority documents have been received.  
 2.) Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3.) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 01 December 2009 was filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of receptor bearing points each including a receptor rotating pin as recited in claim 30 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "L", "W", "12a", "30", and "35". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- a. The limitations "non-bendable elongate vessel unit" as recited in claim 1 and "elongate non-bendable vessel unit" as recited in claims 16 and 27 lack antecedent basis. Applicant relies upon the drawings to disclose that the elongate vessel unit is unbendable, but the examiner contends that the drawings do not clearly disclose such an arrangement. Although the drawings illustrate the elongate vessel unit in an unbent state, the drawings do not indicate that the elongate vessel unit cannot be bent.
- b. The phrase "mating pins" as recited in claim 31 lacks proper antecedent basis. Claim 27, upon which claim 31 depends, requires "one or more mating pins". Therefore, claim 27 does not require a plurality of mating pins.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1 - 16 and 27 - 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitations "non-bendable elongate vessel unit" as recited in claim 1 and "elongate non-bendable vessel

unit" as recited in claims 16 and 27 lack enabling disclosure in the specification. Applicant relies upon the drawings to disclose that the elongate vessel unit is unbendable, but the examiner contends that the drawings do not clearly disclose such an arrangement. Although the drawings illustrate the elongate vessel unit in an unbent state, the drawings do not indicate that the elongate vessel unit cannot be bent. As much as the drawings of the present application teach a non-bendable elongate vessel unit, Fig. 1 of Koch also teaches a non-bendable elongate vessel unit (pipe assembly 6).

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 27 - 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 5 of claim 27 recites "one or more mating pins" and lines 9 and 10 recite "mating pins". It is unclear as to whether applicant is claiming one or more mating pins or a plurality of mating pins. For purposes of examination, claim 27 has been interpreted as claiming one or more mating pins, as best understood by the examiner.

#### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 - 10, 12 - 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koch (4,486,123) in view of Laursen (4,676,696).

11. Regarding claim 1, Koch discloses a method for the installation of an elongate process unit (pipe assembly 6) on the seabed, where the process unit has a first end and a second end (Fig. 1), comprising preparing and moving the process unit (6) to a position to be ready to be launched from the vessel in a generally vertical orientation (Fig. 1), and launching the process unit from the vessel (column 2, lines 37 - 45), lowering the unit to the seabed (Fig. 1). Applicant argues that Koch fails to disclose a non-bendable vessel unit. Examiner interprets the vessel unit as disclosed by Koch is a particular pipe segment and not the pipeline as a whole. Applicant states that the pipeline of Koch is assembled from shorter stiff segments of pipe, thus admitting that the individual pipe segments are non-bendable. Therefore, Koch teaches a non-bendable vessel unit (pipe segment). Applicant relies upon the drawings to disclose that the elongate vessel unit is unbendable, but the examiner contends that the drawings do not clearly disclose such an arrangement. Although the drawings illustrate the elongate vessel unit in an unbent state, the drawings do not indicate that the elongate vessel unit cannot be bent. As much as the drawings of the present application teach a non-bendable elongate vessel unit, Fig. 1 of Koch also teaches a non-bendable elongate vessel unit (pipe assembly 6).

Koch fails to disclose wherein there is a receptor device located on the seabed, or deploying the process unit from a vertical orientation to a horizontal orientation. Laursen teaches a receptor device (guide tube 2) for a process unit (flowline section 1) that is located on the seabed (Fig. 1; column 1, line 64), that deploys the process unit from a vertical orientation to a horizontal orientation (Figs. 3, 10, and 11).

Regarding claim 2, Laursen teaches wherein the process unit (1) is guided until it meets the receptor device (2) before the device is attached to the unit (Fig. 1).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method of installing an elongate process unit of Koch to include the receptor device of Laursen in order to ensure that less damage is done to the unit during placement, instead of letting the elongate unit just hit the sea floor and bend until it is laid horizontally will do much more damage than inserting the unit into a receptor, and having the receptor pivot to a 90 degree angle to allow the horizontal placement on the seabed.

Regarding claim 3, Koch further discloses moving and guiding the process unit (6) toward the stern end of the vessel (1) (Fig. 1), and launching the first end of the process unit over a stern roller (23) (Fig. 5; column 5, lines 27 - 33) located at the stern of the vessel.

Regarding claim 4, Koch further discloses using a vessel crane (9) and vessel wire system (27) to safely guide the process unit (6) (Fig. 1; column 5, line 65 - column 6, line 2).

Regarding claim 5, Koch in view of Laursen discloses all the steps of the method of claim 5, except for wherein the receptor device is located on the vessel and not already at the subsea location. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to change the location of the receptor device, because the method as claimed has the same functionality as the method taught by Koch in view of Laursen (see rejection for claim 1). Koch in view of Laursen contains all the method steps to perform this function, and it would have been obvious to try relocating the receptor device to allow for easier insertion of the process unit.

Regarding claim 6, Koch further discloses transferring the process unit (6) from a transport frame (pipe storage 21) to a vessel deck (Fig. 3; column 5, lines 27 - 33).

Regarding claim 7, Koch discloses all of the limitations of the above claim(s) except for the first process unit end has mating pins to engage the process unit with the receptor device. Laursen further discloses wherein the first process unit end (1) has mating pins (pivot 14) to engage the process unit with the receptor device (Figs. 1 and 2) to form a hinge with a horizontal axis that permits the process unit to hinge about the horizontal axis. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the method as disclosed by Koch with the mating pins as taught by Laursen to form a hinge with a horizontal axis that permits the process unit to hinge about the horizontal axis.

Regarding claim 8, Koch further discloses having two launch beams (pipeline section guide 15) for guiding the process unit into the sea (Fig. 1), and providing support for the process unit onto the seabed.

Regarding claim 9, Koch discloses all of the limitations of the above claim(s) except for the lock pins. Laursen further discloses wherein there is a lock pin (key 13) included on the end of the process unit to lock in place and keep the mating pins (pivot 14) in place (Fig. 2). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify the method of Koch in view of Laursen to include the mating pins and lock pins of Laursen in order to permit the process unit to be easily hinged to a horizontal position on the seabed (column 2, lines 36 - 42 of Laursen). Koch in view of Laursen fails to disclose the lock pin being spring loaded and ROV releasable. Examiner takes official notice that spring loaded and ROV releasable lock pins are well known in the art.

Regarding claim 10, Koch further discloses keeping control of the process unit during lowering by use of a vessel wire system (27) from a vessel crane (9), and where the weight of the

process unit is gradually transferred to a lowering wire (27) (Fig. 1). Koch fails to disclose moving and positioning the vessel directly above the receptor device, and lowering the process unit vertically into the receptor device. Laursen teaches moving and positioning the vessel directly above the receptor device, and lowering the process unit vertically into the receptor device (Fig. 1) to improve the ease and efficiency with which the vessel unit is connected to the receptor device. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the method as disclosed above with the moving and positioning of the vessel relative to the receptor device as taught by Laursen to improve the ease and efficiency with which the vessel unit is connected to the receptor device.

It is noted that the references are silent to the axial force component of the tension generated by the process unit being directed towards the receptor device, however it would have been obvious to a person having ordinary skill in the art that the amount of axial force would be reduced by the method taught by Koch in view of Laursen because of the substantially vertical installation of the process unit into the receptor device.

Regarding claim 12, Koch further discloses that the wire system includes a launch wire (lower wire 27) extending from the vessel crane (9) via a snatch block (loading/holding space 4) located on the stern end of the vessel (Fig. 1), also a launch-control wire (middle wire 27) and a lowering wire (top wire 27), and are all connected to a different winch (see winch in Figure 1, directly above reference character 2).

Regarding claim 13, Koch fails to disclose loosening or removing said receptor device from said first vessel unit end. Laursen teaches wherein the receptor device is removed from the process unit end after use (after being moved from vertical to horizontal position, the process

unit is connected to manifold 16, see column 2 lines 59 - 68 and column 3 lines 1 - 9) to allow one end of the flowline section (1) to be connected to an oil manifold and the other end of the flowline section to be connected to an oil well. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the method as disclosed above with the removal of the receptor device to allow one end of the flowline section (1) to be connected to an oil manifold and the other end of the flowline section to be connected to an oil well.

Regarding claim 14, Koch in view of Laursen fails to disclose wherein the process unit is a horizontal gravitational separator, but the method for installing a process unit of Koch in view of Laursen would function the same way no matter what the process unit was, be it a pipe, tank, vessel, or gravitational separator. Therefore, there is no criticality set forth by the Applicant of this certain type of process unit having any effect on the method as claimed, so it is found to be an obvious variant of the method of Koch in view of Laursen.

Regarding claim 16, Koch in view of Laursen discloses all the elements of the method of placing the elongate process unit on the seabed, therefore it is considered to be obvious to one having only routine skill in the art to know how to reverse this process and retrieve the elongate process unit from the seabed.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koch in view of Laursen as applied to claim 1 above, and further in view of Pattison (3,690,112). Koch in view of Laursen fail to disclose wherein there is a subsea skid placed on the seabed to support and guide the process unit, or wherein the process unit has a saddle to engage the subsea skid. Pattison teaches a method for installing process units in the sea that uses a subsea skid (pipe

guide 26) to guide the process unit and support it on the seabed. Pattison also discloses wherein the bottom of the process unit (27) engages the subsea skid and transfers the load to the skid (Fig. 3). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method of Koch in view of Laursen to include the subsea skid of Pattison in order to hold the process unit in place while also protecting it from being damaged (column 2, lines 8-24 of Pattison).

13. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koch in view of Laursen as applied to claim 1 above, and further in view of Coblenz (6,375,407). Koch in view of Laursen fail to disclose the preliminary step of placing the process unit and receptor device on a flatbed truck, and then transferring the receptor and process unit to the vessel by lifting them onto the vessel. Coblenz discloses that is known in the art to transport cargo on a flatbed truck to the side of a vessel ship, and then unload the truck by lifting the cargo onto the vessel (Fig. 1). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method of Koch in view of Laursen to include the preliminary step of lifting the devices from a flatbed truck of Coblenz because it is a well-known way of transferring cargo and materials to vessels.

14. Claims 27, 28, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laursen in view of Koch.

Regarding claim 27, Laursen discloses a method comprising: directing said first vessel unit end (end of flowline section 1) to enter a receptor device (guide tube 2) having a framework having one or more mating pins (one of pivots 14), including a locking pin (one of pivots 14), and two or more receptor bearing points (point of contact between each pivot 14 and the

associated pivot support 6) on the framework, the framework being capable of receiving said first vessel unit end when said receptor device is disposed on a deployment site on a seabed, said framework being spaced apart from said seabed; retaining said first vessel unit end in said one or more mating pins; locking said one or more mating pins (14) with said locking pin (14); lowering said vessel unit (1) towards said seabed, pivotally about a fulcrum formed by at least one bearing point, wherein an axial force component of tension, when generated by said vessel unit is directed towards said receptor device (2) and a second transversal force component of tension, when generated by said vessel unit, is less than said first transversal force component of tension; disposing said vessel unit on said seabed (Figs. 1 - 3; column 1, lines 60 - 67; column 2, lines 36 - 42). Laursen fails to disclose transferring the weight of said vessel unit (1) to a lowering wire connected to said second vessel unit end and spaced apart from the first vessel unit end, said lowering wire having a first transversal force component of tension; releasing said lowering line from said second vessel unit end to complete installing said vessel unit on said seabed. Koch teaches transferring the weight of said vessel unit (6) to a lowering wire (27) connected to said second vessel unit end and spaced apart from the first vessel unit end, said lowering wire (27) having a first transversal force component of tension; releasing said lowering line (27) from said second vessel unit end to complete installing said vessel unit on said seabed (Fig. 1) to control the positioning of the vessel unit on the seabed. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the method as disclosed by Laursen with the use of a lowering wire as taught by Koch to control the placement of the vessel unit on the seabed. It is noted that the references are silent regarding the

magnitudes of the axial and transversal force components of tension. However, the magnitudes of the force components are a matter of design choice within the skill in the art.

Regarding claim 28, Laursen further discloses a receptor dampening member (slot 5) disposed within said receptor cylinder (sidewall 9) (Fig. 1).

Regarding claim 30, Laursen further discloses receptor rotating pins (pivot supports 6) and receptor bearing points (point of contact between each pivot 14 and the associated pivot support 6) (Fig. 2; column 2, lines 36 - 42).

Regarding claim 31, Laursen further discloses a rotational guide (centering ridges 15) cooperating with a shoulder disposed on said mating pins (pivots 14) (Figs. 1 and 2; column 2, lines 22 - 23). Examiner notes that the phrase "cooperating with" as recited in the claim does not require physical contact and, therefore, since both the rotational guide and the mating pins function to ensure proper alignment of the flowline section within the guide tube, the rotational guide and the mating pins "cooperate" with each other.

15. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laursen in view of Koch as applied to claim 27 above, and further in view of Kypke et al. (4,662,788). Laursen in view of Koch discloses all of the limitations of the above claim(s) except for a dampening device selected from the group consisting of an elastomeric material, a piston, and a spring. Kypke et al. teaches a dampening device (spring stack 32) comprising a spring made of elastomeric material (Fig. 4; column 4, lines 27 - 30) to maintain engagement between the vessel unit and the receptor when the vessel unit is brought into contact with the receptor. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the method as disclosed by Laursen in view of Koch with the dampening

spring as taught by Kypke et al. to maintain engagement between the vessel unit and the receptor when the vessel unit is brought into contact with the receptor.

16. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laursen in view of Koch as applied to claim 27 above, and further in view of Daeschler et al. (4,899,822). Laursen in view of Koch discloses all of the limitations of the above claim(s) except for at least one pair of alignment devices disposed on a module foundation. Daeschler et al. teaches a plurality of alignment devices (indexing pins 210) disposed on a module foundation (manifold 40) (Fig. 5; column 5, lines 10 - 19) to allow for proper positioning of the vessel unit (template 200) relative to the foundation (40) with minimal assistance from equipment and personnel at the sea surface. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the method as disclosed by Laursen in view of Koch with the alignment devices as taught by Daeschler et al. ) to allow for proper positioning of the vessel unit relative to the foundation with minimal assistance from equipment and personnel at the sea surface.

#### *Response to Arguments*

17. Applicant's arguments filed 01 December 2009 have been fully considered but they are not persuasive.

Applicant argues that Koch fails to disclose a non-bendable vessel unit. Examiner interprets the vessel unit as disclosed by Koch is a particular pipe segment and not the pipeline as a whole. Applicant states that the pipeline of Koch is assembled from shorter stiff segments of pipe, thus admitting that the individual pipe segments are non-bendable. Therefore, Koch teaches a non-bendable vessel unit (pipe segment).

Applicant argues that the receptor (guide tube) as taught by Laursen only supports a very little portion of the weight of the pipeline, whereas the receptor of the present application supports the entire weight of the vessel. Examiner replies that the claims do not require the receptor to support the entire weight of the vessel and, therefore, since the guide tube of Laursen supports some of the weight of the pipeline it meets the claim limitations.

*Conclusion*

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN D. ANDRISH whose telephone number is (571)270-3098. The examiner can normally be reached on Mon - Fri, 7:30am - 5:00pm, Alternate Fri off, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Kreck/  
Primary Examiner, Art Unit 3672

SDA  
3/3/2010